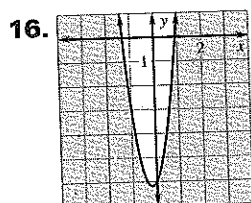
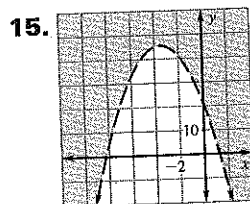
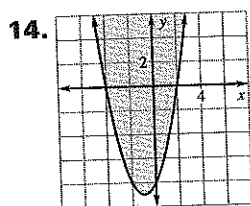
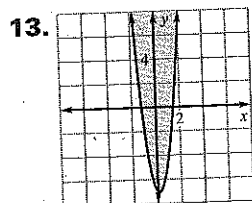
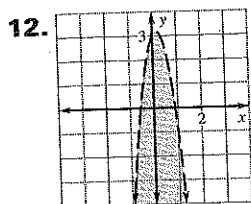
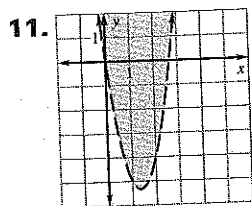
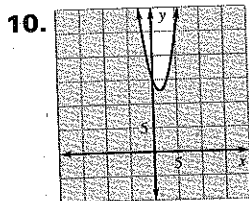
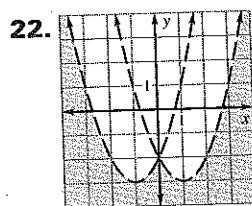
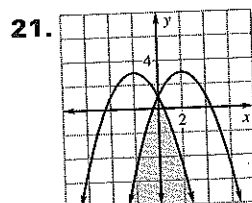
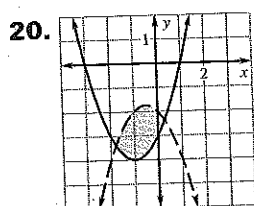


Lesson 4.9, continued



17. A 18. C 19. B

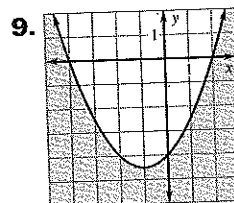
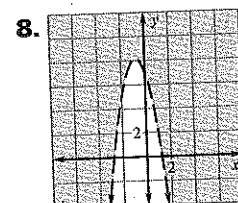
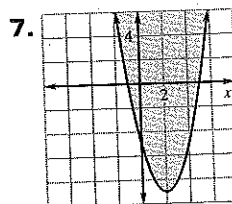
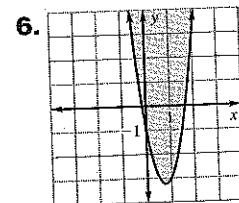
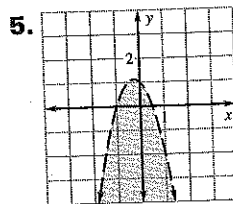
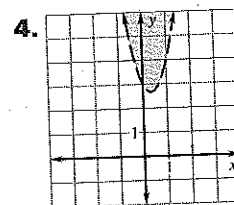
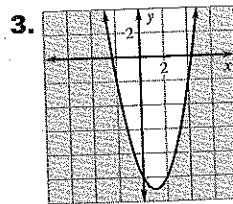
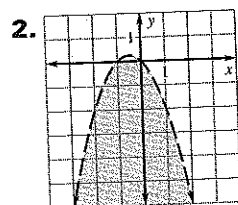
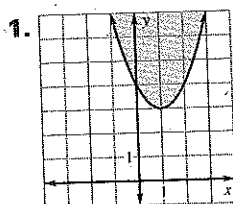


23. $x < -4$ or $x > 3$ 24. $-3 \leq x \leq 6$

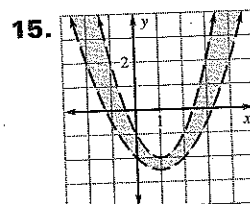
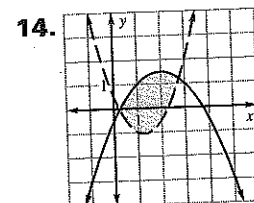
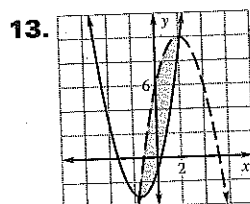
25. $-6 < x < -\frac{1}{2}$ 26. $-0.02x^2 + 1.2x > \frac{10}{3}$

27. $2.92 < x < 57.08$ 28. yes

Practice Level C



10. A 11. C 12. B



16. $x < -2$ or $x > 7$ 17. $3 \leq x \leq 8$

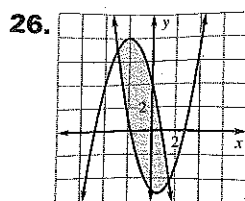
18. $x < -3$ or $x > 3$ 19. $-6 \leq x \leq -\frac{5}{3}$

20. $x < 3$ or $x > 4$ 21. all real numbers

22. $-\frac{5}{3} < x < \frac{5}{4}$ 23. no solution

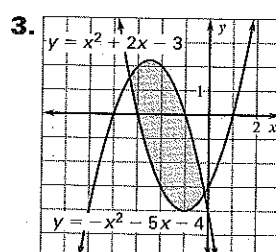
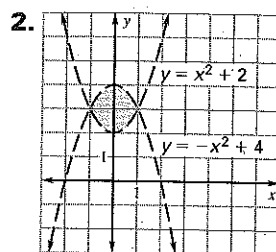
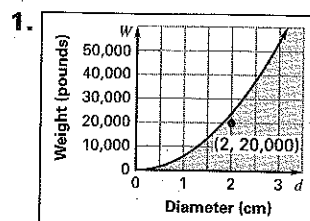
24. $-10 < x < \frac{3}{5}$ 25. $-3, \frac{3}{2}$

Lesson 4.10, continued



27. $\frac{729}{24}$ square units 28. $4\sqrt{6}$ square units

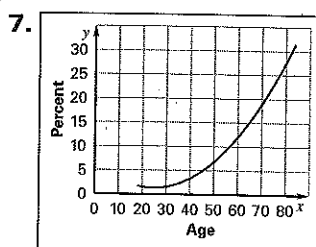
Study Guide



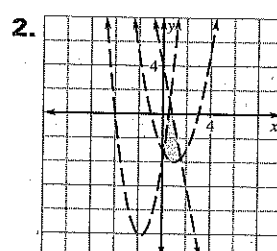
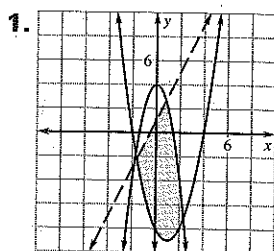
4. $(-4, 1)$ 5. $(-1, 2)$ 6. $(-3, -1)$

Real-Life Application

1. 1.7% 2. 1.58% to 12.0% 3. 12.0% to 31.48% 4. less than 45.4 years old 5. greater than 77.25 years old 6. 64.65 years to 82.52 years



Challenge Practice



3. The value of the quadratic $x^2 + 2x + 4$ is positive for every real value of x . So, the solution of the inequality consists of the entire set of real numbers. 4. The solution of the inequality consists of one value of x , $x = -1$.

5. The quadratic $x^2 + 3x + 5$ is not less than 0 for any value of x . So, the inequality has no solution. 6. The inequality is satisfied for all real numbers except $x = 2$. 7. $b \leq -4$ or $b \geq 4$

8. b can be any real number. 9. $b \leq -2\sqrt{30}$ or $b \geq 2\sqrt{30}$ 10. $b \leq -2\sqrt{10}$ or $b \geq 2\sqrt{10}$

11. If $a > 0$ and $c \leq 0$ or $a < 0$ and $c \geq 0$, b can be any real number. If $a > 0$ and $c > 0$ or $a < 0$ and $c < 0$, $b \leq -2\sqrt{ac}$ or $b \geq 2\sqrt{ac}$.

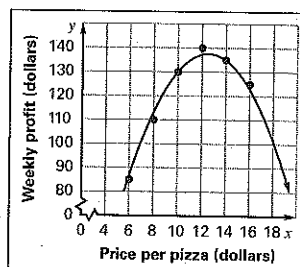
12. $0 \leq x \leq 8.25$

Lesson 4.10

Teaching Guide

1. $y = a(x - h)^2 + k$; (h, k) is the vertex of the parabola; $y = a(x - p)(x - q)$; x -intercepts

2. let x represent price, y represent profit, and plot the points; parabola



3. about \$125; between \$12 and \$14

Practice Level A

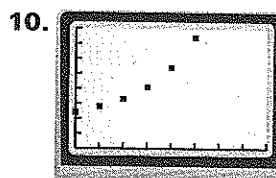
1. $y = (x - 2)^2$ 2. $y = 2(x - 1)^2 - 3$

3. $y = -\frac{1}{2}(x + 2)^2 + 2$ 4. $y = 3(x - 1)(x - 4)$

5. $y = (x + 3)(x - 2)$ 6. $y = -2x(x + 5)$

7. $y = x^2 + x + 1$ 8. $y = x^2 - 3x - 2$

9. $y = -2x^2 + 4x + 3$



11. $y = 2x^2 - 0.4x + 25$